

Table1. Summary of O&M activities and permit actions in the Newark Bay Study Area.

Permittee/ Project Name	Permit Number	Work Authorized/ Waterway	Permit Expiration/ Extension Date	Percentage of Work Completed	Estimated Date Work to be Performed	Estimated Volume to be Removed
Caschem Division of Rutherford	2004-00720	Structures/ dolphins (Newark Bay)	18-Aug- 2006	0%	Not Known – Depends if Funds are Available	N/A
Port Authority of NYNJ	2004-00520	Pier Maintenance (Newark Bay)	15-Jun-2006	100%	N/A	N/A
City of Elizabeth Municipal Marina	2004-00149	Rehabilitate Wavebreak (Arthur Kill)	27-Apr- 2007	100%	N/A	N/A
City of Bayonne	2003-01276	Dredging/Wetland Enhancement (Newark Bay)	15-Jul-2007	100% for Dredging, 50% for Wetland Enhancement	Dec-06 for Remaining 50% of Wetland Enhancement	N/A
Texaco Downstream Properties, Inc	2003-01034	Pier Rehabilitation/Bank Stabilization (Newark Bay)	11-Apr- 2008	40%	Jun-06	N/A
Bayonne Municipal Utilities Authority	2002-01080	Structures (Kill Van Kull)	15-Oct- 2005	Not Known	Not Known	N/A
K. Hovnanian of Jersey City IV, LLC	2002-01075	Fill Placement as part of Remedial Cleanup (Newark Bay)	15-Oct- 2005	Not Known	Not Known	N/A
Port Authority of NYNJ	2002-00711- 2	Dredging at Berths 76 & 78 (Newark Bay)	11-Aug- 2007* and 11-Aug- 2014*	100% of Initial Cycle	Performed as needed for long term maintenance	
Port Authority of NYNJ	2002-00711	Dredging at Pt. Nwk/Eliz (Newark Bay)	16-Oct- 2005* and 16-Oct- 2012*	80%	Performed as needed for long term maintenance	
Port Authority of NYNJ	2001-01023	Bayonne Bridge Abutment Rehabilitation/Dredging (Kill Van Kull)	9-Nov-2006	Dredging complete except for 350 Cy for NY-side fender	Jan 06	350 CY
Darling International	1999-13370	Dredging (Newark Bay)	28 June 2010	0%	Jan 06	22,000CY
Amerada Hess Corp.	1999-11040	Dredging with Upland Disposal (Newark Bay)	31-Aug- 2010	0%	Dec-05	20,500 CY
Motiva Enterprises LLC	1999-03620	Dredging With Upland Disposal (Newark Bay)	1-Nov-2010	0%	Not Known	37,550 CY
OENJ Cherokee Corp.	1997-07040	Dredging/Structures (Newark Bay)	26-Apr- 2006	Not Known	Not Known	175,700 CY

Permittee/ Project Name	Permit Number	Work Authorized/ Waterway	Permit Expiration/ Extension Date	Percentage of Work Completed	Estimated Date Work to be Performed	Estimated Volume to be Removed
Port Authority of NYNJ	1997-02031	Wharf reinforcement and fender maintenance at Port Newark/Elizabeth; (Newark Bay)	25-Mar- 2007	Ongoing	Performed as needed for long term maintenance	N/A
Port Authority of NYNJ	1995-04370	Newark Bay Confined Disposal Facility (NBCDF)	20-May- 2000 extended to 19 May 2007	Not Known	No projects are currently scheduled to place dredged material at the CDF	N/A
City of Elizabeth	2005-00868	Rehabilitate Wavebreak and Bulkhead (Arthur Kill)	Pending	N/A	N/A	N/A
Goethals Bridge Modernization	2004-00712	(Arthur Kill)	Pre- application Meeting	N/A	N/A	
NBG Group	2004-00285	Structures/Pier (Kill van Kull)	Pending	N/A	N/A	N/A
O&M		Dredging Port Newark Pierhead and/or Branch Channels	Pending funds	0%	May 24 to Sept. 30, 2006	400,000 CY

Table 2. Summary of the number of historical core and grab samples within the portion of the NBSA that coincides with the USACE harbor deepening areas ("Study Area").

STUDY NAME	Dates	Benzo(a)pyrene		Chromium		DDT		Mercury		PCB		2,3,7,8 TCDD	
		Study Area	Bins*	Study Area	Bins*	Study Area	Bins*	Study Area	Bins*	Study Area	Bins*	Study Area	Bins*
NOAA NS&T Hudson-Raritan Phase I ⁽¹⁾	1991	1	1	1	1	1	1	1	1	1	1	0	0
NOAA NS&T Hudson-Raritan Phase II ⁽¹⁾	1993	4	4	2	2	4	4	4	4	4	4	19	19
Maxus Passaic R. Sediment Study ⁽¹⁾	1991	3	3	3	3	3	3	3	3	3	3	3	3
Maxus Passaic R. Sediment Study ⁽¹⁾	1992	9	9	9	9	9	9	9	9	9	9	9	9
Maxus Passaic R. Sediment Study ⁽¹⁾	1993	3	3	3	3	3	3	3	3	3	3	3	3
REMAP ⁽¹⁾	1993	7	7	7	7	7	7	7	7	7	7	0	0
REMAP ⁽¹⁾	1994	6	6	6	6	6	6	6	6	6	6	0	0
Newark Bay Reach B,C,D ⁽¹⁾	1997	6	6	6	6	5	5	6	6	6	6	5	5
Newark Bay Elizabeth Channel ⁽¹⁾	1998	3	2	3	2	3	2	3	2	3	2	3	2
Newark Bay Reach ABCD ⁽¹⁾	1999	7	0	7	0	7	0	7	0	7	0	7	0
Sediment Sampling ⁽¹⁾	1999	1	1	1	1	1	1	1	1	1	1	1	1
REMAP ⁽²⁾	1998-99	9	9	0	0	0	0	0	0	0	0	10	10
CARP ⁽³⁾	2000-01	2	2	2	2	2	2	2	2	2	2	2	2
TOTALS		61	53	50	42	51	43	52	44	52	44	62	54

Sources:

(1) NOAA Query Manager Database

(2) REMAP 1998/99 Database

(3) Contaminant Assessment and Reducation Project (CARP) Database

* The number of core and grab samples that were included in the calculation of average concentration in surface and deeper sediments

Table 3. Summary of USACE composite cores collected from 2003-2004 (1)

Dredge Area	Number of Cores	Number of Composites	2,3,7,8 TCDD Concentration (ng/kg)			
			Range	Mean	Median	St. Dev
S-NB-1	25	10	3.83 - 157.29	28.1	14.65	45.99
AK-2/3	61	20	10.45 - 169.73	50.35	46.89	34.64
S-KVK-2	18	9	0.14 - 188.65	49.55	14.38	62.98

Sources:

- (1) Aqua Survey Inc. "Technical Report on the Sampling and Testing of Sediment from the [S-NB-1, AK-2/3, S-KVK-2] Contract of the Harbor Deepening Project for Upland Beneficial Use in New Jersey and/or New York."

Table 4a. Contaminant Concentrations in Surface Sediments, USACE Dredge Material, and Estimated Post-Dredging Core.

Contaminant	Units	Concentrations in the Surface Sediments of Southern Newark Bay (1)			AK Dredge Material			Estimated Concentration in Post-Dredging Core (1)	Ratio: Post-Dredging:Existing	NB Dredge Material			KVK Dredge Material		
		Standard			Standard					Standard			Standard		
		Average	Deviation	Number	Average	Deviation	Number			Average	Deviation	Number	Average	Deviation	Number
2,3,7,8 TCDD	ng/kg	53.5	43.4	53	50.4	34.6	20	53.5	1.00	28.1	46.0	10	49.6	63.0	9
Benzo(a)pyrene	µg/kg	1358.8	3443.4	52	2221.9	2270.0	20	1369.1	1.01	481.2	376.9	10	1150.0	764.8	9
Total PCBs	µg/kg	622.4	531.4	43	1818.7	946.9	20	636.7	1.02	287.8	106.9	10	945.1	811.0	9
Mercury	mg/kg	2.6	1.3	43	6.3	3.0	20	2.6	1.02	1.0	0.5	10	2.8	2.1	9
Chromium	mg/kg	138.7	62.8	41	216.0	69.7	20	139.6	1.01	87.6	33.2	10	110.7	80.1	9
Total DDTs	µg/kg	171.4	359.9	42	853.8	795.7	20	179.5	1.05	58.0	84.5	10	23.0	25.3	9

Table 4b. Estimated Contaminant Concentrations in Post-Dredging Core.

Contaminant		Estimated Concentration in 6" Surface Slice (1)			Ratio: Post-Dredging:Existing	
		Dredging Loss rates:			Dredging Loss rates:	
		0.20%	1%	3%	1%	3%
2,3,7,8 TCDD	ng/kg	53.5	53.5	53.4	1.00	1.00
Benzo(a)pyrene	µg/kg	1360.9	1369.1	1389.6	1.01	1.02
Total PCBs	µg/kg	625.3	636.7	665.2	1.02	1.07
Mercury	mg/kg	2.6	2.6	2.7	1.02	1.05
Chromium	mg/kg	138.9	139.6	141.5	1.01	1.02
Total DDTs	µg/kg	173.0	179.5	195.8	1.05	1.14

Notes

(1) Calculated for surface slice of 6 inches using Equation (8).